What is a Cooperative Research and Development Agreement (CRADA)?

A CRADA is a legal agreement between a federal laboratory and one or more non-federal parties such as private industry and academia. CRADAs offer both parties the opportunity to leverage each other's resources when conducting research and development (R&D) that is mutually beneficial. Through teaming, the parties share the risks and benefits of collaborative research and development. The end objective of a CRADA is to advance science and technology that not only meets Air Force mission requirements but also has viability in other potential commercial applications.

How does it work?

Under a CRADA, both parties may provide and share personnel, services, facilities, equipment or other resources in conducting the R&D. The non-federal party may also provide funds to the federal laboratory. Since the collaborating party does not receive any federal funds, normal government procurement requirements do not apply. A CRADA can be executed in a short period of time and can be easily renewed or modified as appropriate.

Under a CRADA, the government may grant the collaborating party patent licenses in any invention made in whole or in part by the laboratory under the agreement, retaining a nonexclusive, nontransferable, irrevocable, paid-up license to practice the invention. Any data or information developed under the CRADA may be treated as proprietary for a maximum of five years.

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[CRADAs]

Cooperative Research and Development Agreements

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Sharing Air Force Technology with the Marketplace

Typical CRADA Elements

A typical CRADA includes a number of standard provisions. Examples of these provisions include the following elements:

> Work Plan - sets forth the nature and scope of the work to be performed

> Financial Obligations - defines what amount of funds, if any, the collaborator will pay the Air Force

> Patents - defines the rights of the parties in regard to inventions made by each party and those made jointly

> Copyrights - defines ownership of copyrighted works of collaborator

> Proprietary Information—defines rights and protections afforded proprietary information brought to the agreement and that developed under the agreement

> Liability - defines what liability, if any, regarding any property furnished, inventions or other intellectual property, and collaborating employees

To view a standard CRADA agreement see Section J III at www.afrl.af.mil/techtran/handbk.

History of the CRADA

The Federal Technology Transfer Act of 1986 (PL 99-502) provided authority for federal laboratories to enter into CRADAs with private companies as well as public & nonprofit organizations. It also allowed the laboratories to negotiate license agreements of intellectual property on behalf of the government.

CRADA Benefits are Mutual and Lasting

Collaboration under a CRADA results in a number of mutual benefits for the participating parties such as effective and efficient use of personnel, facilities, financial resources, and technological know-how through a team effort.

Commercial Partners Benefit through...

> Profitable new products and processes

> Improved access to Air Force scientists, facilities, and equipment

> Reduced costs of R&D through leveraging

> Reduced time between laboratory innovation and commercial production

> A focused concentration of effort brought to bear on specific industrial problems

> Opportunities to commercialize inventions made under the CRADA

> An opportunity to enhance U.S. defense preparedness while reaching corporate objectives

The Air Force Benefits through...

> Improved opportunities to develop and transfer technology that are mutually beneficial

> Access to non-government expertise and know how

> Building the industrial base through multiple uses of technologies

> Lower acquisition costs of products with larger industrial base

> Reduced costs of R&D through leveraging

> Increased familiarity with market needs and trends

> Sharing of royalty income with the inventors and the laboratory

The CRADA Advantage

Creating Leverage For A Win—Win Business Situation

The end result of a CRADA is the expeditious transfer of technology into the commercial marketplace as well as fulfilling Air Force needs.

A CRADA offers the following proven advantages for each team member:

> Enables both partners to stretch their research budgets and optimize resources.

> Provides a means of sharing technical expertise, ideas, and information in a protected environment.

> Permits federal and non-federal scientists to work together on projects while offering non-federal partners access to a wide range of expertise in many scientific disciplines within the government.

> Allows partners to agree to share intellectual property emerging from the effort and agree that the non-government partner may retain exclusive license to patentable research.

> Permits the federal government to protect information emerging from the CRADA from disclosure for up to five years

> The collaborator for commercial uses can exclusively exploit intellectual property created under a CRADA, while the government will retain a license to use the technology for government purposes.

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To begin Air Force CRADA discussions visit www.afrl.af.mil/techtran and contact your regional Technology Transfer Officer.

Research and Development Technology Areas

The following list is a small sample of the breadth and depth of R&D technology areas available for transfer to the commercial marketplace from Air Force laboratories. Air Force scientists, engineers are world leaders in the development of these and other technology areas that may be of interest to commercial firms.

> Advanced manufacturing
> Information display and decision support
> Advanced fuels and engine lubricants
> Electron optical systems
> Aeromechanics
> Turbine and rocket engine propulsion systems
> Sensors
> Optical imaging
> Advanced materials and structures
> Environmental sciences
> Education and training
> Software development
> Modeling and simulation
> Microelectronics
> Artificial intelligence
> Lasers
> Safety and security